DEPARTMENT OF HEALTH AND HUMAN SERVICES

Public Health Service

National Institutes of Health

National Institute of Dental and Craniofacial Research

National Advisory Dental and Craniofacial Research Council

Summary Minutes

Date: May 24-25, 1999
Place: Building 31, Conference Room 10
National Institutes of Health
Bethesda, Maryland 20892

DEPARTMENT OF HEALTH AND HUMAN SERVICES
NATIONAL INSTITUTES OF HEALTH
NATIONAL INSTITUTE OF DENTAL AND CRANIOFACIAL RESEARCH

MINUTES OF THE
NATIONAL ADVISORY DENTAL AND CRANIOFACIAL RESEARCH COUNCIL

May 24-25, 1999

The 158th meeting of the National Advisory Dental and Craniofacial Research Council (NADCRC) was convened on May 24, 1999, at 8:30 a.m., in Building 31, Conference Room 10, National Institutes of Health (NIH), Bethesda, Maryland. The meeting was open to the public from 8:30 a.m. to 1:00 p.m., followed by the closed session for consideration of grant applications from 9:00 a.m. on May 25, 1999, until adjournment at 1:00 p.m. Dr. Harold C. Slavkin presided as Chair.

Members Present:

Dr. Judith E. N. Albino
Dr. John F. Alderete
Dr. Ernesto Canalis
Dr. Marilyn Carlson
Dr. D. Walter Cohen
Dr. Dominick P. De Paola
Dr. Caswell A. Evans, Jr.
Dr. Jay Alan Gershen
Dr. Marjorie K. Jeffcoat
Dr. Harold Morris
Dr. E. Dianne Rekow
Colonel Michael P. Rethman
Dr. Martha J. Somerman
Dr. Everett Vokes

Members of the Public Present:

Dr. Roger Bulger, President and Chief Executive Officer, Association of Academic Health Centers, Washington, D.C.
Dr. William T. Butler, Dental Branch, University of Texas Health Sciences Center, Houston
Dr. Kenneth Chance, Meharry Medical College, Nashville, TN
Dr. Joseph Ciardi, Consultant, Bethesda, MD
Dr. Robert J. Collins, Deputy Director, American Association for Dental Research (AADR) and International Association for Dental Research (IADR), Alexandria, VA

Dr. Stephen Corbin, Vice President, Professional and Institutional Advancement, Oral Health America, Brookville, MD
Dr. Maureen Hannley, American Academy of Otolaryngology-Head and Neck Surgery, Alexandria, VA
Dr. Marc Heft, University of Florida, Gainesville, and current Harald Löe Scholar, NIDCR
Dr. Cynthia E. Hodge, President, National Dental Association, Washington, D.C.
Ms. Shannon Howard, American Dental Hygienists' Association, Washington, D.C.
Dr. Karl Huden, American Association of Dental Schools (AADS), Washington, D.C.
Dr. Dirk Iglehart, Surgery Department, Duke University Medical Center, Durham, North Carolina
Dr. Earl Kudlick, Howard University, Washington, D.C.
Mr. Scott Litch, AADS, Washington, D.C.
Mr. Amith K. Majumdar, American Student Dental Association, and Student, Temple University School of Dentistry, Philadelphia, PA
Dr. Robert E. Mecklenberg, Dental Coordinator, Smoking and Tobacco Control Program, National Cancer Institute, NIH
Mr. Paul Moore, Capitol Publications, Inc., Alexandria, VA
Dr. Wendy Mouradian, Consultant, NIDCR
Dr. Jeffrey C. Murray, Dows Institute of Dental Research, University of Iowa, Iowa City
Dr. Edward O'Neil, Executive Director, Center for Health Professions, University of California at San Francisco
Ms. Claire Patterson, President, Trigeminal Neuralgia Association, Barnegat Light, NJ
Dr. Eli Schwarz, Executive Director, AADR and IADR, Alexandria, VA
Mrs. Lois Slavkin, Past Executive Director, Center to Advance PreCollege Science Education, University of Southern California, Los Angeles
Mr. Michael Szarek, Oral Sciences, University of Minnesota, Minneapolis
Mr. Van Thompson, University of Medicine and Dentistry of New Jersey, Newark, NJ
Dr. Rick Valachovic, Executive Director, AADS, Washington, D.C.
Ms. Joan Wilentz, Consultant and Science Writer, Chevy Chase, MD
Ms. Elaine Young, Juvenile Diabetes Foundation, Washington, D.C.

Federal Employees Present:

National Institute of Dental and Craniofacial Research:

Dr. David Barmes, Special Expert, Office of International Health (OIH)
Ms. Carolyn Baum, Committee Management Specialist and Council Secretary, Office of Science Policy and Analysis (OSPA)
Ms. Carol M. Beasley, Chief, Human Resources Management Branch, Office of Administrative Management (OAM)
Dr. Henning Birkedal-Hansen, Scientific Director, NIDCR, and Director, DIR
Ms. Karina Boehm, Education Specialist, Office of Communications and Health Education (OCHE)

Dr. Norman S. Braveman, Associate Director for Clinical, Behavioral, and Health Promotion Research, Division of Extramural Research (DER)
Dr. Patricia S. Bryant, Director, Behavior, Health Promotion, and Environment Program, Program Development (PD), DER
Ms. Sharrell S. Butler, EEO Manager
Ms. Joy Chambers, Grants Technical Assistant, PD, DER
Dr. Lois K. Cohen, Director, OIH
Dr. James Corrigan, Evaluation Officer, OSPA
Mr. George J. Coy, Chief, Financial Management Branch, OAM
Dr. Thomas Drury, Statistician (Health), OSPA
Ms. Yvonne H. du Buy, Executive Officer and Chief, OAM
Ms. Brenda Farmer, Secretary, OCHE
Ms. Carla G. Flora, Chief, Information Technology and Analysis Branch (ITAB), OCHE
Mr. William Foley, Grants Technical Assistant, PD, DER
Dr. Isabel Garcia, Special Assistant for Science Transfer, OCHE
Dr. William J. Gartland, Scientific Review Administrator, Scientific Review Section (SRS), Program Operations (PO), DER
Ms. Christen Gibbons, Computer Specialist, ITAB, OCHE
Dr. Kenneth A. Gruber, Director, Chronic Disabling Diseases: Osteoporosis and Related Bone Disorders Program, PD, DER
Dr. Kevin Hardwick, International Health Officer, OIH
Dr. H. George Hausch, Chief, Scientific Review Branch, PO, DER
Ms. Deane K. Hill, Computer Programmer, Planning, Evaluation, and Legislation Branch (PELB), OSPA
Ms. Lorrayne Jackson, Diversity Program Specialist, and Co-Director, Diversity Programs, DER
Ms. Susan Johnson, Acting Director, OCHE
Dr. Dushanka V. Kleinman, Deputy Director, NIDCR, and Executive Secretary, NADCRC
Dr. Eleni Kousvelari, Director, Biomaterials, Biomimetics, and Tissue Engineering Program, and Director, Infectious Diseases: AIDS Program, PD, DER
Ms. Wendy A. Liffers, Director, OSPA
Dr. James A. Lipton, Special Assistant for Training and Career Development, DER
Dr. Dennis F. Mangan, Director, Infectious Diseases Program, PD, DER
Mr. Richard Marsophia, Grants Technical Assistant, PD, DER
Dr. J. Ricardo Martinez, Director, DER
Dr. Joyce Reese, Technology Transfer and SBIR/STTR Administrative Program, PD, DER
Dr. Edward Rossomando, Technology Transfer Program Director, Office of the Director (OD)
Dr. Martin Rubinstein, Chief, Grants Management Section (GMS), PO, DER
Dr. Ann L. Sandberg, Director, Neoplastic Diseases Program, and Director, Comprehensive Centers of Discovery Program, PD, DER
Dr. Yong He Shin, Scientific Review Administrator, DER
Dr. Yasaman Shirazi, Scientific Review Administrator, DER
Dr. Harold C. Slavkin, Director, NIDCR

Dr. Judy A. Small, Director, Inherited Diseases and Disorders Program, PD, DER
Ms. Lynn Warwick, Secretary to the Director, NIDCR
Dr. Philip Washko, Scientific Review Administrator, DER
Ms. Dolores Wells, Program Analyst, PELB, OSPA
Ms. Mary Ann Williamson, Computer Specialist, ITAB, OSPA
Ms. Nora Winfrey, Secretary, DER
Ms. Susan Wise, Program Analyst, PELB, OSPA
Dr. G. Wayne Wray, Chief, PO, DER
Mr. Kyeong-Nam Yeon, Special Volunteer, DER

Other Federal Employees:

Dr. C. Richard Buchanan, Assistant Director of Dental Education and Research, Department of Veterans Affairs, Washington, D.C.
Dr. Frederick Eichmiller, Director, Paffenbarger Research Center of the ADA Health Foundation, National Institute of Standards and Technology, Department of Commerce, Gaithersburg, MD
Dr. Lireka P. Joseph, Director, Office of Health and Industry Programs, Food and Drug Administration, Rockville, MD
Dr. William Maas, Chief Dental Officer, Centers for Disease Control and Prevention, Chamblee, GA

OPEN PORTION OF THE MEETING

I. CALL TO ORDER AND WELCOMING REMARKS

Dr. Harold C. Slavkin, Director, NIDCR, called the meeting to order, welcoming all attendees to the 158th meeting of the Council. He invited all attendees to introduce themselves.

Dr. Dushanka V. Kleinman, Deputy Director, NIDCR, informed the Council that Dr. Slavkin had just received the NIH Champion of Diversity Award. Dr. Slavkin is the first recipient of this award, given to him for his leadership on NIH's Workplace Diversity Initiative and other diversity programs at the NIH and NIDCR.

II. APPROVAL OF MINUTES

The minutes of the Council's meeting on January 24-25, 1999, were considered and unanimously approved.

III. FUTURE COUNCIL MEETING DATES

The following dates for future Council meetings were confirmed:

September 27-28, 1999
January 20-21, 2000
June 8-9, 2000
September 21-22, 2000

IV. REPORT OF THE DIRECTOR

Dr. Harold C. Slavkin, Director, NIDCR, commented on the nature of NIH and NIDCR activities, research progress, research training, new emphases at the NIH, and the NIDCR budget. Dr. Slavkin's written Director's Report to the NADCRC was sent previously to the Council members and is appended to these minutes as Attachment III.

NIH and NIDCR Activities

Since the Council meeting in January 1999, the NIDCR has been engaged in a variety of activities, as described in the Director's Report. Dr. Slavkin noted that the dynamism of NIDCR is closely connected to that of other NIH institutes and centers, other Federal agencies, nonprofit foundations, and the private sector. The "intellectual backdrop" for this dynamism is the changing patterns of disease, health care, infrastructure, and scientific opportunities, all of which are stimulating cross-disciplinary, multidisciplinary, and trans-NIH activities more than ever before.

He highlighted one activity, a press briefing sponsored by the Friends of the NIDCR, on January 27 to launch the NIDCR's National Awareness Campaign: Oral Complications of Cancer Treatment. Dr. Slavkin noted that about one-third of an estimated 1.5 Americans who are treated with chemotherapy or radiation each year experience oral complications related to their treatment. The Institute of Medicine will soon be completing a study of the effectiveness and costs related to oral health care and medically compromised individuals.

Research Progress

Dr. Slavkin noted that remarkable progress has been made in research over the past 4 months and is indicative of the incredible opportunities available for basic and clinical research addressing oral, dental, and craniofacial diseases and disorders. Within this "blink" of time, extramural and intramural researchers have sequenced more genes than at any time previously, accumulated vast amounts of genetic information to significantly enhance investigators' ability to explore gene-environment-behavior interactions, elucidated the virulence of certain genes, identified genes associated with tooth formation, and made strides in translational and patient-oriented research (e.g., in biomimetics, tissue engineering, and biomaterials).

Much of this progress has been made in collaboration with other scientists throughout the world. Dr. Lois K. Cohen, Associate Director for International Health, and the staff of NIDCR's Office of International Health are identifying exciting opportunities for promoting oral health and transferring scientific knowledge worldwide through collaboration with the NIH's Fogarty International Center and with other Federal agencies (e.g., the Department of State) and multilateral organizations (e.g., the World Health Organization, the World Bank).

Dr. Slavkin referred the Council to three publications related to this work. Regarding genes and behavior, he cited a recently published book on the biologist Seymour Benzer, entitled Time, Love, Memory: A Great Biologist and His Quest for the Origins of Behavior, by Jonathan Weiner (Knopf, 1999). NIDCR-supported research on tooth development is described in Trends in Genetics (February 1999), and the promise of tissue engineering for growing new organs is featured in Scientific American (April 1999).

Research Training

Dr. Slavkin said that research training continues to be an important NIDCR activity. The Institute currently supports approximately 300 trainees, a higher number than ever supported previously at one time. Dr. Slavkin noted that NIDCR aims to increase support for research training and will seek guidance from NIDCR's Blue Ribbon Panel for Training and Career Development. Two specific issues that are being addressed across the NIH and in which NIDCR has special interest are innovative training paradigms for "new," "bilingual" scientists who can bridge both the biomedical and behavioral sciences and contribute to multidisciplinary research and an interest to address the unfilled faculty positions in dental schools where much of the research training takes place.

New Emphases at NIH

Dr. Slavkin mentioned that the mission of NIH continues to be research. Within this framework, the NIH is increasingly interested in reducing the burden of disease and the health disparities experienced by different population groups. Two initial aims for the NIH and NIDCR are identification of culturally sensitive individuals to conduct research on health disparities and development of partnerships with other organizations supporting health services, interventions, and training. Dr. Slavkin noted that NIDCR staff have met with the leadership of the Health Resources and Services Administration (HRSA) and the Agency for Health Care Policy and Research (AHCPR) to develop a strategy for relating health care services, training, and research synergistically.

Dr. Slavkin also noted that, because of the changing demographics of the U.S. population, the training of a scientific workforce must be revamped to increase participation of underrepresented minorities in biomedical and behavioral research and that patient advocacy groups must be involved in shaping NIDCR's research agenda. NIDCR staff have already met with various advocacy groups to learn about the needs of their constituents and to identify areas of mutual interest.

NIDCR Budget

Since the previous Council meeting, NIDCR has participated in the hearings of both the House and Senate Appropriations Committees. NIDCR's total budget for FY 1999 is $238.4 million, which could be reduced by a proposed 1 percent transfer ($502,000) to the NIH Director. Dr. Slavkin noted that the NIDCR continues to cofund initiatives with other NIH institutes and centers as a way of leveraging NIDCR's resources. The appropriations process for the FY 2000 budget is under way; details are provided in the Director's Report.

V. PERSPECTIVES AND EXPERIENCES WITH INTERDISCIPLINARY HEALTH PROFESSIONS' RESEARCH, EDUCATION, AND PRACTICE

Dr. Kleinman introduced this main session of the Council meeting by noting that research conduct has evolved over the past decades from individual investigators to interdisciplinary teams. The session presenters provided Council members with unique perspectives, from academic health centers, schools, and foundations, of the many issues affecting the ability to optimize collaborations across and among the health professions. The purpose of the session was to stimulate discussion of solutions to the complex issues related to achieving multidisciplinary research, education, and practice. Dr. Kleinman also noted that the NIH community will have an opportunity during the coming summer to comment on the restructuring and reorganization of NIH's Center for Scientific Review, which has been proposed in order to better accommodate the needs of multidisciplinary clinical research. Four speakers presented their perspectives and experiences regarding interdisciplinary research, education, and practice related to the health professions.

Interdisciplinary Research at Academic Health Centers

Dr. Roger Bulger, President and Chief Executive Officer, Association of Academic Health Centers (AAHC), noted two points regarding the environment of academic health centers: inter- and multidisciplinary teams have been a longstanding tradition for meeting hospital-based clinical problems, and medicine has gradually extended beyond the curative mode to include health promotion and disease prevention, especially in relation to the changing population (e.g., greater ethnic diversity, increasing numbers of elderly persons). Dr. Bulger noted that this is an exciting time for clinical research and that dentistry has been a leader in this transition.

He also noted that, in order for disease prevention efforts to be successful, they must include a caring dimension, a biopsychosocial perspective, and involvement of patients in planning clinical, education, and research efforts. In the current patient-centered health care system, the patient is part of the health care team and must be involved in making choices about health care.

Managed care has had an impact on all aspects of health care--research, clinical practice, health education, and health care delivery. Dr. Bulger noted that the trend toward increased managed care is fundamentally cost-driven (i.e., a response to escalating health care costs) and is affecting the traditional methods of funding academic health centers. In the managed care environment, the distribution and cross-subsidization of resources among the research, education, and service components of the centers must be completely open and transparent. This change in the management of the centers' resources is effecting changes in the overall mission and structure of the centers. The research, education, and service components are becoming more integrated; the role of clinical department chairs is weakened; the role of faculty is changing; and the discipline-focused, "silo"-based education is being extended across professions.

Dr. Bulger emphasized the need to remain aware of the changes taking place. The AAHC has begun to address these changes. Recently, it completed a 2-year study of the reintegration of education and research at academic health centers. This study shows that, although the inertia of the "silos" in academia is great, reintegration is proliferating throughout U.S. higher education and entire universities are becoming involved in addressing health issues. In addition to the study, the AAHC has initiated a division of global health, a network of U.S. universities active in health promotion, and linkage with Healthy People 2010.

The Future of Interdisciplinary Education and Research

Dr. Edward O'Neil, Executive Director, University of California at San Francisco Center for Health Professions, noted that the health care environment will drive changes in education and research. He cited four major forces, or trends, behind these changes: the "destiny" of demography; technological and scientific changes; the consumer revolution in health care; and the continued role, or presence, of the market in health care (especially the increasing diversity and aging of the U.S. population).

In general, educational and research institutions are not prepared for the demographic changes that are taking place and are dominant. The increasingly diverse and multicultural society is not reflected in these institutions, which continue to be staffed mostly by white, middle-class men. Also, the aging of the population is not reflected in adequate numbers of trained geriatric physicians; 25,000 geriatric physicians are needed, but only 6,000 have been trained. The influence of technological and scientific changes is best demonstrated by the dominant market value of pharmaceuticals, biotechnology, and durable medical equipment in the health sector and by free worldwide access to information via the Internet.

Health care also is now driven by a consumer orientation, rather than a corporate orientation. The power of individual consumers is indicated by the approximately 12 million self-help groups in the United States, almost none of which are mediated by health care professionals, and by data which show that more than 50 percent of the visits to health care practitioners are to alternative practitioners and is paid for almost entirely out-of-pocket. In response to consumer demands, the health care market is shifting from a supply-based orientation (i.e., providers) to a demand-based orientation (i.e., consumers).

Dr. O'Neil noted that, despite these changes, the demand for an interdisciplinary approach in dentistry is low. He suggested that dentistry has been left out in the system of health care services, but will change when the system becomes integrated and reaches out to dentistry. At that time, the dental community will have to address several key questions: Is the number of dentists appropriate? Do they have the right skills? Is there appropriate leadership in the profession and dental schools to respond? Importantly, dentistry will have to recognize the need to develop far more agility than it currently has to respond to the changing environment and to develop a broader skill base to understand the changes and to provide leadership for practitioners in the future.

Case Study: Interdisciplinary, Cross-Professional Research, Education, and Patient Care

Dr. Jay Gershen, Executive Vice Chancellor, University of Colorado Health Sciences Center, presented a case study of changes at an academic health center to integrate research, education, and patient care. At the University of Colorado Health Sciences Center (UCHSC), these changes were stimulated by the design and construction of a new physical plant to upgrade and expand a campus that is more than 80 years old. To plan for the new facility, administrators reviewed UCHSC's growth in budget and funding over the past 30 years and predicted this growth for the next 20 years.

Predictions that the center's research and education budgets would continue to grow significantly and that outpatient visits would increase each year indicated a need to double the size of the campus over the next 20 years in order to remain competitive as an academic health center. A new site was located for building a world-class, cutting-edge facility on the grounds of a retired military base and adjacent to the development of a private bioscience research park. The private/public partnership is expected to provide a strong economic impetus for Colorado. The Institutional Master Plan for the new UCHSC has been approved and is expected to take 12 years to complete. The first groundbreaking for the new UCHSC and university hospital took place in May 1998, and construction of the ambulatory facility began this month. Funding is being provided by Federal, state, and philanthropic sources and the university hospital.

The theme for the new UCHSC at Fitzsimons will be overlapping education, clinical, and research "zones." Dr. Gershen noted that students and faculty of the health professional schools, including dentistry, will be integrated across these zones in an interprofessional learning environment. The intent is to break down the "walls" or "silos" of the schools and departments.

Dr. Gershen highlighted the importance of state leadership in such a project, as indicated by a recent study in Colorado entitled *Research America*. In a survey of Colorado residents, 93 percent indicated that it was important for the state to be a leader in medical research, and 86 percent indicated that medical research is important to Colorado's economy. Announcement of the results of this study in the press helped to heighten the priority for medical research and to stimulate state and other funding for this research.

In closing, Dr. Gershen noted that the UCHSC case is indicative of the positive efforts being undertaken by academic health centers. He invited Council members to tour the facility when they are in Colorado.

Perspective of the American Association of Dental Schools

Dr. Rick Valachovic, Executive Director, American Association of Dental Schools (AADS), described the changes that have taken place in dentistry over the past 10-15 years and the new "wave" of activities that can be expected over the next 10-15 years as a result of today's leadership. Currently, the traditional education model for dentistry (2 years of basic sciences and 2 years of clinical sciences) remains, and interdisciplinary sharing and activities are limited. Yet, from the perspective of patient care, a variety of interdisciplinary opportunities have evolved that include dentistry (e.g., cancer or pediatric teams, pain clinics, craniofacial research).

Dental education has changed in major ways since the 1950s and late 1970s-early 1980s. During this time, the number of dental schools increased from 42 to 61 and then fell by 7 since the late 1980s and increased by 1 recently; Dr. Valachovic noted that no more closures are expected. The number of applications to dental schools peaked in the mid-1970s, when the average age of applicants was 27; during the late 1980s, the number of high-quality applicants declined significantly and the ratio of applicants to openings was slightly more than 1:1. Currently, the age of applicants is much lower than 27, the number of applicants is increasing significantly, and the number of 1st-year enrollees is stable at 4,000. Among these enrollees, 37 percent are women (compared to 50 percent in medicine and 75 percent in veterinary medicine). The number of applicants from underrepresented minorities has increased significantly between 1989 and 1997, but the percentage of Hispanic Americans, Native Americans, and African Americans continues to decline despite efforts to increase their representation, whereas the percentage of Asian-Pacific Islanders has risen significantly.

Between 1950 and 1995, the number of dental school graduates declined from 6,000 to 4,000. The average net income of full-time dental practitioners increased significantly between 1990 and 1994, from $94,200 to $140,000. Yet, the average 1st-year costs for tuition and fees at U.S. dental schools continue to climb dramatically, and the debt of dental school graduates has increased significantly. The participation of dental school graduates in advanced education has been flat between 1971 and 1996, although enrollment in Advanced Education in General Dentistry (AEGD) has increased somewhat because of the availability of funding for this program.

Dr. Valachovic highlighted the following four forces as major influences for interdisciplinary education, research, and practice: educational institutions (universities and dental schools), organized dentistry, the market, and government. He elaborated on each of these forces, noting differences in the environment 10-15 years ago and today. For example, 10-15 years ago, dental schools were closing, were very isolated, and engaged in little interdisciplinary activity; they had a robust full-time faculty but a dearth of applicants. In contrast, the academic health centers were

thriving and had a strong medical science base. Today, dental schools are prospering, but suffer significant shortages of faculty (now 300-400 funded dental school positions); the demands on faculty (e.g., for cross-disciplinary teaching) are great, and the schools are moving toward integration with their universities, which perceive them as added value at a time when the academic health centers are in a state of crisis. Currently, dental schools have a large pool of applicants who are seeking opportunities in the health professions, and the dental research community is fostering interdisciplinary, collaborative research. Interdisciplinary activity may be one way to reduce or stabilize dental school costs.

For the first time in many years, organized dentistry is now experiencing a "golden age in dentistry." Practitioners are busy, salaries are increasing, dental school graduates have multiple opportunities for satisfying careers, and the demand for dental hygienists is high. As recently as the late 1980s, dentistry was faced with a lack of opportunities for dental school graduates, practitioners, and dental hygienists. Market forces also were disadvantageous: the recession affected dental salaries and practice, the availability of new technology was limited, and although medicine was doing well, there was little understanding of the association between oral and systemic health and disease. Today, dentistry is benefitting from a strong economy (e.g., through increased salaries of practitioners, reimbursement for dental services), major new technological developments, and a better appreciation of the oral-systemic connection. Also, for dentistry, the impact of managed care has been less than for medicine because the demand for dentists outweighs the supply of dentists and there are no excesses "to squeeze." Less than 50 percent of the U.S. population has dental insurance, and coverage is limited.

Dr. Valachovic emphasized that government forces will play a major role in stimulating interdisciplinary education, research, and practice over the next 10-15 years. Health, research, and education are major interests of the current Administration, and efforts that will foster the integration of these interests in dentistry and medicine are already under way within the Department of Health and Human Services, the NIH, and Congress. Two major efforts at the NIDCR, for example, are the Surgeon General's Report on Oral Health and the Blue Ribbon Panel for Training and Career Development. Opportunities for change will be highlighted in the products of both of these efforts. Within the Congress, two bills have been introduced to improve dental health and to expand access to dental care. Also, at a recent congressional forum held in association with the National Parent Consortium, oral health was identified as one of three themes for congressional attention, along with violence and lead poisoning.

Discussion

The Council noted that promotion of interdisciplinary research, education, and practice among the health professions is a complex problem and will require multiple, complex responses. Although interesting niches of activity are occurring (e.g., creation of "community-campus partnerships in health" at the University of California at San Francisco, multidisciplinary community-based strategies at some academic health centers), much more effort is needed. Leadership in addressing the issues and stimulating additional activities is essential for making the changes needed for the future.

Dentistry needs to be included in these activities and can offer a leadership role. The AADS, for example, has established a Center for Educational Policy and Research to address pertinent issues.

A major concern is the imbalance between the supply of, and the demand for, dental practitioners. The number and pipeline of dental school graduates need to be increased to accommodate the current and future demand for dental practitioners. Planning for the next 20-30 years must begin today; the current dental school graduates will be the dental practitioners until approximately 2040. Now is the time to build resources. Emphasis needs to be given to enhancing the access of underrepresented minorities to the academic environment and, particularly, the health professions.

The Council noted that the methodology for training health professionals, including dental practitioners, does not meet the health care needs of the changing U.S. populations. Training methods and programs need to be revised to foster interdisciplinary education, research, and practice and to promote culturally sensitive and culturally relevant practices for populations that do not have broad access to care. Dr. Valachovic noted, for example, that 11,016 counties in the United States are defined as "dental health professions shortage areas." Including involvement in community programs and cross-cultural activities as part of the dental school training may be one approach to enhancing dental students' appreciation of the health care needs in these areas. The Council also observed that clinical care environments are "hotbeds" for demonstrating interdisciplinary teamwork, especially in inner-city public health hospitals and rural clinics.

The Council expressed some concern that the increasing opportunities for dental practitioners will detract dental school students from pursuing a research career. Dr. Valachovic noted that all of dentistry is in a major crisis and that crisis stimulates change. The NIDCR and the NIH have an important role to play in assuring that increased funding for research is included in efforts to build resources for dentistry and the health professions.

The Council emphasized the importance of continuing to confront two additional issues affecting dental education and practice: debt forgiveness, and reimbursement for dental care. Dr. Valachovic said that the AADS is collaborating with HRSA to increase Medicaid reimbursement for dental services. He noted that the Government is rapidly moving toward reimbursement for individuals who have not had access to dental care. Community health centers and the National Health Service Corps offer additional opportunities for dental care. Dr. Valachovic also noted that forgiveness of dental school loans (up to $30,000 per year for 4 years) is currently a major emphasis at the AADS. The National Health Service Corps and one of the bills recently introduced in Congress also include provisions for debt forgiveness.

In closing, staff noted that the session was very informative and served to "ring the alarm bell" for dentistry. Dr. Kleinman thanked the speakers and the Council for their stimulating comments and for raising issues for further discussion.

VI. CONCEPT CLEARANCES

NIDCR staff presented two concepts for Council's review and approval. Dr. Kleinman noted that the Council is specifically asked to review the scientific, technical, and program significance of the goals of each concept; the availability of technology and other resources to achieve the goals; the practical, scientific, and clinical potential of the proposed initiative; and the procedures for inclusion of women and minorities. Dr. Martinez said that the NIDCR is developing new initiatives for extramural research support in response to the large number of excellent opportunities for dental, oral, and craniofacial research.

Centers for Research to Reduce Health Disparities

Dr. Norman S. Braveman, Associate Director for Clinical, Behavioral, and Health Promotion Research, Division of Extramural Research, described a proposed Request for Applications (RFA) for Centers for Research on Health Disparities (CRHD). The objectives of this initiative are to (a) support research that will lead to an understanding of the factors involved in health disparities of children and their caregivers related to oral, dental, and craniofacial diseases and disorders; (b) support the development, testing, and evaluation of interventions designed to reduce these health disparities; and (c) provide a training and mentoring resource to develop research capacity by expanding opportunities for culturally sensitive research and participation of underrepresented groups in the scientific workforce.

Dr. Braveman noted that the burden of dental and craniofacial diseases and disorders is extensive and ranges from birth defects (e.g., cleft lip and palate) to injuries to the head and face, head and neck cancers, oral complications resulting from treatment for cancer, oral infections (e.g., dental caries, periodontal diseases), orofacial pain associated with a variety of craniofacial conditions (e.g., temporomandibular joint diseases, Bell's palsy, trigeminal neuralgia), salivary gland dysfunction (e.g., with Sjögren's syndrome, cystic fibrosis), xerostomia resulting from use of prescription drugs, and oral complications of human immunodeficiency virus infection. In the United States, this burden of disease still falls disproportionately among racial and ethnic minorities, individuals from lower socioeconomic classes, women and children, and elderly persons.

Nearly 50 million Americans suffer from a disproportionately high incidence and prevalence of dental, oral, and craniofacial diseases. The focus of the new RFA would be to reduce these health disparities through basic, translational, clinical, patient-oriented health services, and community-based research. The CRHDs would be modeled on the NIDCR's successful Regional Research Centers in Minority Oral Health (RRCMOHs). They would link three components: NIDCR-supported research; community interventions and service; and training, career development, and strengthening of the scientific workforce. The central focus would be research, and emphasis would be given to development of multidisciplinary, inter- and intrainstitutional networks and partnerships. The approach to partnerships would be inclusive and allow for joint efforts, for example, between majority and minority institutions and with other NIH institutes, other agencies, academic health centers, state and local health organizations, and patient-oriented groups. An evaluation component also would be included to assess the centers' impact on reducing health disparities.

The NIDCR anticipates issuing the RFA in June 1999 and hosting regional workshops to discuss the RFA in September 1999. Letters of intent would be due in December 1999, and applications would be due in February 2000. The earliest awards would be made in December 2000.

In discussion, members expressed several concerns and noted the advantages of the following: requiring partnerships between majority and minority institutions, as in the RRCMOHs; involving community-based organizations; linking with research centers supported by other NIH institutes and other agencies (e.g., the Centers for Disease Control and Prevention, HRSA); encouraging a broad distribution of centers across the nation; assuring adequate institutional support and commitment over time to fully realize gains in reducing health disparities; including isolated elderly persons who may not be caregivers as a key population group; and rethinking the complexity of evaluating the centers' impact on reducing health disparities.

Following an extensive discussion during which the Council made several substantive suggestions, the Council unanimously approved the concept. Dr. Kleinman thanked the Council for its discussion and said that NIDCR would send a revised concept incorporating members' suggestions to the Council.

NIDCR Clinical Trial Planning Grants and Pilot Grants

Dr. Braveman described one of two proposed Program Announcements related to clinical trials. The objective of the first initiative, Clinical Trial Planning Grants, is to facilitate the design and organization of full-scale, well-designed clinical trials to test effective preventive, diagnostic, and treatment approaches to craniofacial, oral, and dental diseases and disorders. The objective of the second, related initiative, Clinical Trial Pilot Grants, is to address preliminary design and methodological issues for specific clinical trials that could be supported under the first initiative.

Dr. Braveman noted that clinical trials are key to developing evidence-based treatment and prevention approaches, meeting the needs of patient groups, and improving health and preventing disease. Previously, NIDCR has supported relatively few clinical trials and the success rates of initial applications for NIDCR clinical trial awards have been low. Too often, the applications include procedures that have not been field-tested, unproven organizational structures, poorly developed operational and experimental designs, inadequately specified endpoints, unrefined intervention strategies, ill-defined target populations, and no preliminary data. With the proposed initiatives, NIDCR hopes to overcome these problems and to facilitate development of successful applications and awards for well-designed clinical trials.

In discussion, the Council agreed that high-quality clinical trials were needed in dental, oral, and craniofacial research and that the concept was positive and worthwhile. Members strongly noted the need for a parallel effort to educate reviewers on study sections and special emphasis panels about the complexity of clinical research in order to ensure fairness of review. The need for increased participation of private institutions (e.g., academic health centers) in clinical trials also was noted.

Members raised questions about the proposed funding for the planning grants and suggested further consideration of the review procedures and criteria specified for these concepts.

The Council approved the concept of Clinical Trial Planning Grants, but did not have time to discuss and vote on the concept of Clinical Trial Pilot Grants. Dr. Kleinman said that NIDCR would consult with Council to develop the concepts further.

Other Concepts

Dr. Kleinman noted that the Clinical Trial Pilot Grants and three additional concepts would be reviewed by Council during the course of the summer. These concepts addressed three aspects of AIDS research: Host Immunity to Candida Infections, Molecular Pathogenesis of Viral Infections, and Microbial Postgenomic Initiatives.

VI. BLUE RIBBON PANEL FOR TRAINING AND CAREER DEVELOPMENT: UPDATE

Dr. Kleinman said that written materials providing an update on the NIDCR Blue Ribbon Panel for Training and Career Development would be sent by mail to the Council after the meeting.

VII. NIDCR 1999 SEYMOUR J. KRESHOVER LECTURE

Dr. Jeffrey C. Murray, Professor of Pediatrics and Biological Sciences, University of Iowa, Iowa City, presented the 1999 Seymour J. Kreshover Lecture. The title of his lecture was "International Studies of Craniofacial Anomalies." Dr. Murray has been an NIDCR grantee since 1988. His research interests include developmental genetics of craniofacial anomalies, molecular genetics of cleft lip and palate, and the epidemiology birth defects. In his lecture, Dr. Murray described this research. He heads a research team that is conducting an international effort to find the genes for clefting. Also, through collaboration with Operation Smile and other investigators, he is studying genetic and environmental causes of clefting in the Philippine population. Clefting is the most common craniofacial anomaly among Filipinos. Dr. Murray also has examined the link between maternal smoking and gene mutations that result in clefting in populations in California, Iowa, and Denmark.

CLOSED PORTION OF THE MEETING

This portion of the meeting was closed to the public in accordance with the determination that it was concerned with matters exempt from mandatory disclosure under Sections 552b(c)(4) and 552b(c)(6), Title 5, U.S. Code and Section 10(d) of the Federal Advisory Committee Act, as amended (5 U.S.C. Appendix 2).

There was a discussion of procedures and policies regarding voting and confidentiality of application materials, committee discussions, and recommendations. Members absented themselves from the meeting during discussion of and voting on applications from their own institutions, or other applications in which there was a potential conflict of interest, real or apparent. Members were asked to sign a statement to this effect.

VIII. REVIEW OF APPLICATIONS

Grant Review

The Council considered 460 applications requesting $100,760,146 in total costs. The Council recommended 345 applications for a total cost of $78,698,156 (see Attachment II).

ADJOURNMENT

The meeting was adjourned at 1:00 p.m. on May 25, 1999.

CERTIFICATION

I hereby certify that the foregoing minutes are accurate and complete.

_____	_____
Dr. Harold C. Slavkin	Dr. Dushanka V. Kleinman
Chairperson	Executive Secretary
National Advisory Dental and	National Advisory Dental and
Craniofacial Research Council	and Craniofacial Research Council

ATTACHMENTS

I. Roster of Council Members
II. Table of Council Actions
III. Director's Report to the NADCRC, May 1999

NOTE: A complete set of open-portion handouts are available from the Executive Secretary.